

THE TYPE SPECIMENS OF AUCHENIPTERID CATFISHES (SILURIFORMES: AUCHENIPTERIDAE) IN THE MUSÉUM NATIONAL D'HISTOIRE NATURELLE, PARIS

by

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ABSTRACT. - This paper demonstrates that several specimens in the collection of fishes of the Muséum national d'Histoire naturelle are type specimens of auchenipterid species described by Valenciennes (1840) and Reinhardt (1874). The study does not include a revision of the group or a systematic analysis. A complete list of the types of the Auchenipteridae in the Muséum national d'Histoire naturelle is included, together with photographs of some specimens. Notes on specimens from the Nationaal Natuurhistorisch Museum, Leiden (RMNH), mentioned by Boeseman (1972), are also presented.

RÉSUMÉ. - L'objectif de cette note est de démontrer que plusieurs spécimens de la collection de poissons du Muséum national d'Histoire naturelle sont en fait les spécimens types des espèces d'Auchenipteridae décrites par Valenciennes (1840) et Reinhardt (1874). Cette étude n'est ni une révision de la famille ni une analyse systématique. Une liste complète des types d'Auchenipteridae du Muséum national d'Histoire naturelle est incluse, avec quelques photographies de certains spécimens. Les auteurs font aussi quelques remarques sur les spécimens du Nationaal Natuurhistorisch Museum, Leyde (RMNH), mentionnés par Boeseman (1972).

Key-words. - Siluroidei, Auchenipteridae, South America, Type-specimens.

The fish collection of the Muséum national d'Histoire naturelle, Paris (MNHN) is one of the largest in the world, with special significance because of the large number of type specimens described by the pioneers of ichthyology, and most of these specimens representing type species of genera created at that time. Forty-seven catalogues of type-specimens have been published from this collection, including one for the Siluriformes by Bertin and Estève (1950), with three other catalogues in preparation.

The MNHN collection has many type series of catfishes (Siluroidei) described by Valenciennes, Geoffroy Saint-Hilaire, Castelnau and Pellegrin. Bertin and Estève (1950) listed 325 type lots of Siluriformes, including those of five species of the family Auchenipteridae (*sensu* Nelson, 1994): *Auchenipterus dentatus* Valenciennes, 1840 (holotype), *A. trachycorystes* Valenciennes, 1840 (holotype), *A. maculosus* Valenciennes, 1840

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(syntype), *Trachelyopterus coriaceus* Valenciennes, 1840 (holotype), and *Glanidium albescent* Reinhardt in Lütken, 1874 (syntype). In connection with these species, Boeseman (1972) published some notes about South American catfishes described by Valenciennes and included remarks on the *Auchenipterus maculosus* and *A. immaculatus* Valenciennes, 1840.

Recently, we examined auchenipterid specimens in the collection of the MNHN, and discovered putative types presumed lost because they were not mentioned by Bertin & Estève (1950) in their catalogue of Siluriformes. These newly discovered specimens include species described by Valenciennes (1840) and Reinhardt (in Lütken, 1874).

Although Bertin and Estève (1950) provided only a list of the auchenipterid type specimens in the MNHN, we include some notes on all the species of this family described by Valenciennes in volume 15 of "Histoire Naturelle des Poissons".

MATERIAL AND METHODS

This study includes specimens from MNHN, Paris (Muséum national d'Histoire naturelle) and RMNH, Leiden (Nationaal Natuurhistorisch Museum). The following abbreviations are used: SL, standard length; TL, total length. The measurements were taken with electronic callipers to 0.01 mm. For comparative analysis between measurements used by Valenciennes and the decimal system: the "pouce", an old French measurement, is equal to 27.07 mm (Anonymous, 1972).

The following criteria were used to recognise the jars considered as containing types: 1) a catalogue number belonging to the old numbering during or after Valenciennes time; 2) the specimens remaining in the original jars with their old external labels; 3) the notes in the old catalogue; and 4) a comparison between the original description (proportional measurements, origin and collector) with the characteristics of the specimens and their labels. An important fact concerning the MNHN catalogue numbers is that numbering started in 1839 just before the date of Valenciennes's publication (1840) and well before his death (1865). In 1840 and later on, many collection numbers were still made in the old format (1 to 9999, A-1 to A-9999, B-1 to B-3187).

RESULTS

Catalogue of types of the MNHN Auchenipteridae

Auchenipterus dentatus Valenciennes, 1840; Hist. nat. Poiss. 15: 210.

MNHN B 0592 (Holotype); size: 118 mm SL; 150 mm TL (measurements taken by R.P. Vari, pers. comm.).

Origin: Paramaribo (Suriname), erroneously stated as Cayenne (Guyana) by Valenciennes; donated by the Leiden Museum (RMNH); collector: most likely Le Vaillant.

Present status: a junior synonym of *Auchenipterus nuchalis* (Spix, 1829) according to Mees (1974).

The above specimen originated from "Cayenne au Musée de Leyde", and Valenciennes noted it was provided by M. Temminck, Director of the Leiden Museum from 1820 to 1858. Boeseman (1972) noted that most of the specimens stated to have been sent to Leiden from Cayenne before 1839 are from Suriname, which is the type locality of *A. dentatus*. Additionally, Boeseman (1972: 301) emphasized that the specimen from

MNHN "must have been sent to Leiden by Dieperink from Suriname". Dieperink (*sic*) is cited in the "Histoire naturelle des Poissons" as a collector. Hendrik-Haagen Dieperink sent 13 packages of animals from 1824 to 1836 to the Rijksmuseum van Natuurlijke Historie, Leiden (Bauchot *et al.*, 1990: 76), and collected several species of fishes from Suriname (Boeseman, 1972). The origin of the MNHN specimen B 0592 indicates that the collector was most probably Le Vaillant, a well-known ornithologist, about whom we have no additional information other than those mentioned below, under *A. furcatus*.

The measurement in the original description of *Auchenipterus dentatus* is "cinq pouces" (equivalent to 135.35 mm). This specimen has been listed by Bertin and Estève (1950) as being 140 mm TL. The actual size (150 mm TL) does not fit exactly with the measurement given by Valenciennes (1840: 210).

Auchenipterus furcatus Valenciennes, 1840; Hist. nat. Poiss. 15: 211.

MNHN B 0213 (Syntype); size: 177.57 mm SL; 229 mm TL (Fig. 1).

Origin: Suriname; collector M.M. (probably M. Melinon).

Present status: a junior synonym of *Pseudauchenipterus nodosus* (Bloch, 1794), according to Royero (pers. data).

Observation: male, well preserved. An old label states: "Suriname; M.M.; Guyane Hollandaise".

MNHN 3049 (Syntype); size: 158.22 mm SL; 212 mm TL.

Origin: "Suriname, Guyane Hollandaise"; given by "Musée des Pays-Bas".

Present status: a junior synonym of *Pseudauchenipterus nodosus* (Bloch, 1794), according to Royero (pers. data).

Observation: this specimen is relatively well preserved. Old label on the jar states: "Suriname. Musée des Pays-Bas". In the old catalogue: "*Auchenipterus furcatus* M.S. Val., 1, Suriname, Musée des Pays-Bas".

MNHN A 8855 (Syntype); size: 119.86 mm SL; 152 mm TL.

Origin: "Cayenne, Guyane française"; given by "Musée des Pays-Bas".

Present status: a junior synonym of *Pseudauchenipterus nodosus* (Bloch, 1794), according to Royero (pers. data).

Observation: male.

According to the original description these specimens originated from "Cayenne ou Suriname" (Valenciennes, 1840: 214), and some of them were collected by Le Vaillant: "ceux-ci faisaient partie des collections de Levaillant (*sic*)". Recently, in August 1996, we have found in a bookshop (antiquariat) in Cambridge (UK), a book relating the journey of Le Vaillant in Africa during the years 1780 to 1785. In the preface of his book, Le Vaillant explains that he was born at Paramaribo in Suriname where his parents had a natural history cabinet. Le Vaillant was mostly an ornithologist but he was collecting natural history specimens in many fields. Later on he migrated to Netherland in Leiden, then to France from where his father was originated. He left France in 1780 to Africa. François Le Vaillant sent fish specimens to MNHN from Suriname and Cayenne, at the end of the 18th century. Thus, *Auchenipterus furcatus* was described from specimens of Le Vaillant and other material sent to Valenciennes by different collectors. The exact number of specimens is not stated, but in the original description several are mentioned as "petits", and on page 214, Valenciennes mentioned that he had received numerous specimens: "Nous en avons reçu plusieurs exemplaires". In the text, Valenciennes made reference only to the size of the longest specimen which is eight "pouces" (= 216.56 mm). This specimen is similar in size to MNHN B 0213 (229 mm TL), but there is no reference to Le Vaillant as collector. The only allusion to a collector is the

inscription "M. M." on the old label, and according to the old registers of the MNHN these initials could refer to M. Melinon who sent many fishes from Cayenne collected in French Guyana. The fishes sent by Melinon to Paris were probably sent before 1840, but were not registered until 1842 and 1855. The records of these two years are written on the same page of the old register of the MNHN. Valenciennes certainly had these specimens in hand when he prepared the volume 15 of the "Histoire naturelle des Poissons".

In the original description, Valenciennes described the viscera and gonads of the specimen. The specimen in question (B 0213) has been opened along the abdomen and agrees with the details of Valenciennes description. His original descriptions of the cranial region and dorsal fin base also match the features of the putative type. Thus it is likely that the specimen MNHN B 0213 is the fish of "huit pouces" described by Valenciennes without any precise identification on the labels and in the old catalogue.

Of further interest concerning the syntypes of *Auchenipterus furcatus*, is that the old label and catalogue have indications that they come from the Museum of Leiden. Valenciennes never mentioned this source, saying only that he received several specimens from "Cayenne" or "Suriname", possibly sent from Leiden. This is quite possible because the old catalogue notes concerning specimen MNHN 3049, from the same syntype series: "*Auchenipterus furcatus* MS Val., Suriname, Musée des Pays-Bas". This is a clear indication that this specimen was used by Valenciennes.

Auchenipterus trachycorystes Valenciennes, 1840; Hist. nat. Poiss. 15: 214.

MNHN A 9422 (Holotype); size: 346 mm SL; 392 mm TL.

Origin: Brazil; given by "Cabinet de Lisbonne".

Present status: *Trachycorystes trachycorystes* (Valenciennes, 1840).

Observation: in the type list of Bertin and Estève (1950), "400 mm TL Sec. monté". Broken at the caudal peduncle.

This specimen was listed by Bertin and Estève (1950) and was recognized as the holotype from the description, the original label, as the only dried specimen (stuffed dry skin) in that collection. It came from the "Cabinet de Lisbonne, et nous le croyons du Brésil". Like many other fish specimens, this one was brought back from Lisbon to Paris by E. Geoffroy Saint-Hilaire in 1808, according to the instructions given by the Emperor Napoleon. The drawing by Valenciennes (pl. 437) is a good representation of this species. A photograph was published by Mees (1974, pl. I). The measurement recorded by Valenciennes was 14 "pouces" (= 379 mm), similar to the actual measurement of 392 mm TL (tip of the tail damaged). Daget and Saldanha (1989: 144) noted that this species was registered with specimens originating from the "Cabinet de Lisbonne".

Auchenipterus maculosus Valenciennes, 1840; Hist. nat. Poiss. 15: 216.

MNHN A 8856 (Syntype); size: 131.12 mm SL; 154 mm TL (Fig. 2).

Origin: "Cayenne, Guyane Française"; given by "Musée de Leyde".

Present status: a junior synonym of *Parauchenipterus galeatus* (Linnaeus, 1766): Mees, 1974.

Observation: in the type list of Bertin and Estève, 1950, "160 mm TL".

MNHN 3048 (Syntype); size: 97.35 mm SL; 119.74 mm TL.

Origin: Suriname; given by "Musée de Leyde".

Present status: a junior synonym of *Parauchenipterus galeatus* (Linnaeus, 1766) according to Mees (1974).

Observation: in the old catalogue of the MNHN: "*Auchenipterus maculosus* MS. Val.; Suriname, Musée des Pays Bas (échange)".

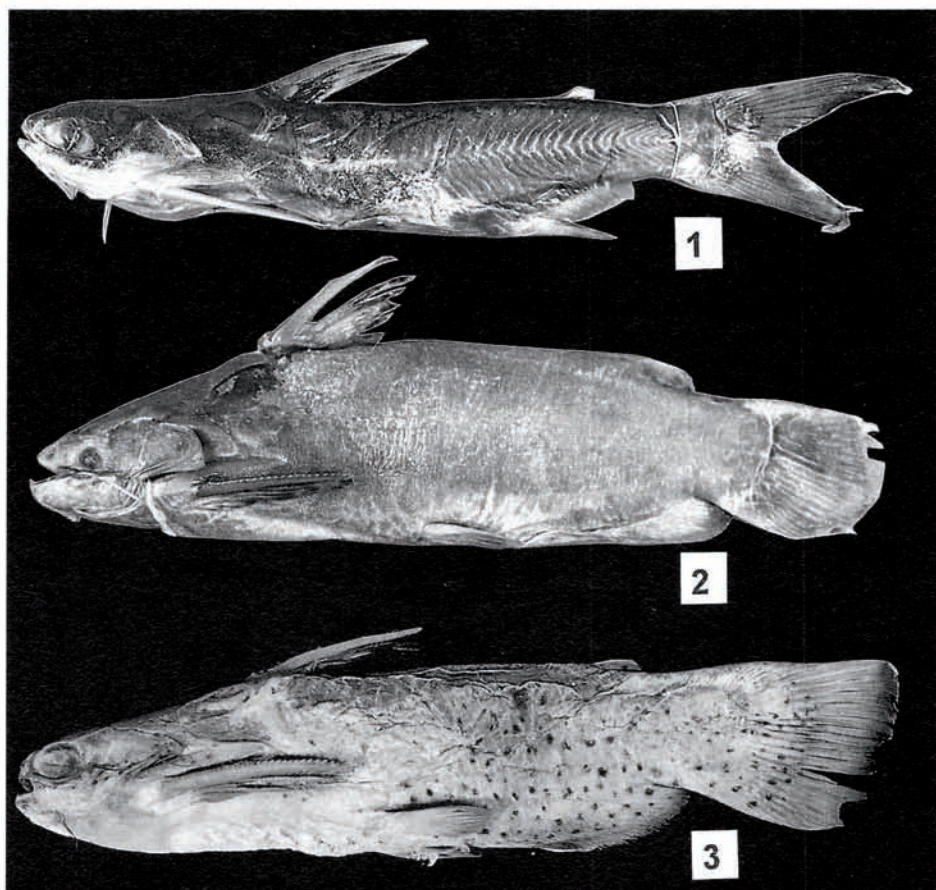


Fig. 1. - *Auchenipterus furcatus* Valenciennes, 1840 (Syntype). MNHN B 0213 (177.57 mm SL).

Fig. 2. - *Auchenipterus maculosus* Valenciennes, 1840 (Syntype). MNHN A 8856 (119.86 mm SL).

Fig. 3. - *Auchenipterus punctatus* Valenciennes, 1840 (Holotype). MNHN B 0216 (135.30 mm SL).

In the original description of *Auchenipterus maculosus*, Valenciennes (1840) mentioned, concerning the size of the specimens, that "un individu envoyé de Cayenne au Musée de Leyde est long de six pouces" ... "un plus petit, de quatre pouces et demi". This indicates that two specimens were used in the description. The specimen MNHN A 8856 with 154 mm (tip of the caudal fin damaged) TL agrees with the largest specimen of Valenciennes description, as "six pouces" are equivalent to 162.42 mm. The "smallest specimen, with four and a half "pouces", equivalent to 122 mm TL agrees with specimen MNHN 3048, which measures is 119.74 mm TL. Boeseman (1972) stated that the number of specimens is ambiguous from the description. However, on page 214 of the original description, Valenciennes referred only to two specimens. This means that the specimen recorded in the Leiden Museum (RMNH 3007) is not part of the syntypes series of *A. maculosus* (see Boeseman, 1972: 302, who provisionally regarded this specimen as a syntype). These two specimens, according to the old label and the old catalogue from

MNHN, were "échange" from the "Musée des Pays-Bas". Moreover the old catalogue indicates "*Auchenipterus maculosus* MS. Val", meaning that these specimens were used in the description by Valenciennes.

Auchenipterus punctatus Valenciennes, 1840; Hist. nat. Poiss. 15: 219.

MNHN B.216 (Holotype); size: 135.30 mm SL; 166.38 mm TL (Fig. 3).

Origin: no data. However Valenciennes (1840) mentioned that this specimen probably came from Brazil.

Present status: *Auchenipterichthys punctatus* (Valenciennes, 1840), according to Royero (pers. data).

Observation: on the old label: "*Auchenipterus punctatus*, Poussielgue ?" This material is well preserved and the colour pattern still remains.

In the original description Valenciennes referred to only one specimen, that "Il est long de six pouces et demi, et a été cédé au Cabinet du Roi par celui de Lisbonne: il vient probablement du Brésil". Daget and Saldanha (1989) noted that this species was not listed by Geoffroy Saint-Hilaire in the fishes coming from "Cabinet de Lisbonne", but was only recorded by Valenciennes as coming from the "Cabinet de Lisbonne".

The measurement given by Valenciennes for only one specimen was six and a half "pouces", equivalent to 175.9 mm TL. The specimen MNHN B 0216 in the Muséum national d'Histoire naturelle measures 166.38 mm TL, near the measurement given by Valenciennes. Moreover, the description of the colour pattern and dorsal cranial surface matches the features of the MNHN specimen. This species belongs to the genus *Auchenipterichthys* Bleeker, 1862, being a synonym of *Auchenipterichthys punctatus* (Valenciennes, 1840) (Royero, pers. data).

Trachelyopterus coriaceus Valenciennes, 1840; Hist. nat. Poiss. 15: 221.

MNHN B 0242 (Holotype); size: 70.45 mm SL; 84.19 mm TL.

Origin: Cayenne; collector Le Prieur.

Present status: *Trachelyopterus coriaceus* Valenciennes, 1840.

Observation: this specimen is not well preserved and no vestige of coloration is present. It was recorded in the type list of Bertin and Estève (1950).

The last species of Auchenipteridae described by Valenciennes in volume 15 of "Histoire naturelle des Poissons" was *Trachelyopterus coriaceus*, who created at the same time the genus *Trachelyopterus*. In the original description, Valenciennes mentioned only one small specimen with the length of three "pouces" (equivalent to 81.21 mm), sent from Cayenne by M. Le Prieur. The specimen in the Muséum national d'Histoire naturelle (MNHN B 0242), is actually 84.19 mm TL, a comparable size.

Glanidium albescens Reinhardt in Lütken, 1874; Over. Dansk Vidensk. Selk. Forh., 3: 31.

MNHN 9571 (Syntype); size: 91.98 mm SL.

Origin: Brésil: Rio São Francisco, Rio das Velhas; given by the Zoological Museum of the Copenhagen University (ZMUC) in 1876.

Present status: *Glanidium albescens* Reinhardt in Lütken, 1874.

Observation: on an old label: "Type, Rio das Velhas (Brésil). Musée de Copenhague". In the type list of Bertin and Estève (1950), "110 mm TL".

Types of Auchenipterids not described by Valenciennes but present in the fish collection of the Muséum national d'Histoire naturelle are *Glanidium albescens* Reinhardt in Lütken, 1874 and *Auchenipterus lacustris* Reinhardt in Lütken, 1874. The first species, listed by Bertin and Estève (1950), was received from the "Musée de Copenhague". The

authors mentioned (page 1) that "La collection renferme aussi des paratypes de Steindachner donnés par le Musée de Vienne, de Reinhardt et Lütken donnés par le Musée de Copenhague", which explains the origin of the type specimen. Bertin and Estève (1950) incorrectly cited this species, the original author being Reinhardt and not Lütken (page 18 of their catalogue) and they regarded this specimen as a paratype, but in fact it must be a syntype because no holotype was designated by Reinhardt (Nielsen, 1974).

Auchenipterus lacustris Reinhardt in Lütken, 1874; Over. Dansk Vidensk. Selk. Forh., 3: 31.

MNHN 9572 (Syntype); size: 105.76 mm SL; 127.15 mm TL.

Origin: Lagoa Santa, Rio São Francisco; given by Reinhardt and Lütken.

Present status: *Parauchenipterus lacustris* Reinhardt in Lütken, 1874.

Observation: in the old catalogue: "*Auchenipterus lacustris* R.L., Lagoa Santa (Brésil); Mus. Copenhague (Reinhardt et Lütken) 1876; types nommés par les auteurs".

This second species described by Reinhardt (1874) was found in the MNHN collection, with a note in the old catalogue: "*Auchenipterus lacustris* R.L., Lagoa Santa (Brésil); Mus. Copenhague (Reinhardt et Lütken) 1876; types nommés par les auteurs". Lütken (1975) referred to nine specimens of this species described by Reinhardt. The details of the MNHN specimen agree with the original description by Reinhardt in Lütken, 1874. According to the genera limits proposed by Mees (1974), this species has been transferred to the genus *Parauchenipterus*.

Type material of auchenipterid species described by Valenciennes in the RMNH

Auchenipterus maculosus Valenciennes, 1840;

RMNH 3007; size: 131.19 mm SL; 153.42 mm TL.

Origin and data: Suriname, Dieperink, "Syntype" of *Auchenipterus maculosus*. The old label inside indicates: "*Trachycorystes galeatus* Lin., *Pimelodus galeatus*, Dieperink".

Auchenipterus immaculatus Valenciennes, 1840; Hist. nat. Poiss. 15: 218.

RMNH 3008; size: 162.40 mm SL; 200 mm TL.

Origin and data: the old label on the outside of the jar states: "*Trachycorystes galeatus*, *Pimelodus galeatus*, Siluridae, Suriname". On an inside label: "RMNH 3008 *Trachycorystes galeatus* (Linn), Suriname, collect. ?". Actual catalogue: Suriname, Holotype.

As mentioned above, concerning *Auchenipterus maculosus*, we think that specimen RMNH 3007 of the Leiden Museum is not a syntype, because the two specimens used by Valenciennes (1840) are deposited in the MNHN.

In the case of *Auchenipterus immaculatus* Valenciennes (1840), Boeseman (1972) noted that "Valenciennes merely states that it had been sent to Leiden from Cayenne together with the 'auchéniptère tacheté', evidently meaning his 'auchéniptère à grandes taches' (*Auchenipterus maculosus*); the length is not indicated. This means that the holotype must be one of the Suriname specimens sent to Leiden by Dieperink, and afterwards referred to *Trachycorystes galeatus*". We have had the opportunity to study this species and we agree with Boeseman (1972) that RMNH 3008 is the holotype. The coloration and the description appear identical, and no other old specimen from MNHN could be found with the same characteristics.

CONCLUSION

The type specimens of the family Auchenipteridae at MNHN represent eight species (11 specimens), six described by Valenciennes (1840) and two species described by Reinhardt (*in* Lütken, 1874). The Valenciennes species were described in the "Histoire naturelle des Poissons". We have found new specimens of the series described by Valenciennes, consisting of (i) the holotype of *Auchenipterus punctatus* Valenciennes, 1840, a single specimen probably from Brazil ("donné au Cabinet du Roi par celui de Lisbonne: il vient probablement du Brésil"); (ii) three syntypes of *Auchenipterus furcatus* Valenciennes, 1840 from "Cayenne and Suriname"; (iii) one more syntype of *Auchenipterus maculosus* Valenciennes, 1840 from "Suriname"; and (iv) one syntype of *Auchenipterus lacustris* Reinhardt *in* Lütken, 1874 from Rio San Francisco in Brazil.

With all the data and the discussion given above, these new specimens of *Auchenipterichthys punctatus*, *Pseudoauchenipterus furcatus* and more syntypes of *Parauchenipterus maculosus*, together with the specimen of *Parauchenipterus immaculatus* deposited in the RMNH, complete the series of "Aucheniptères" and "Trachélyoptères" described by Valenciennes (1840) in chapter 8 of volume 15 of the "Histoire naturelle des Poissons".

Another important item concerning the species described by Valenciennes in "Histoire naturelle des Poissons" is the citation of the descriptions. Mees (1974) and Stigchel (1946) have referred to the 4th edition of this publication, in which the pagination differs from the first edition published in Paris and Strasbourg. For example, in the synonymy of *Auchenipterus nuchalis* (Spix, 1829) listed by Mees (1974) "*Auchenipterus dentatus* Valenciennes, 1840, *in* Cuvier and Valenciennes, Hist. Nat. Poiss. (4^e éd.), 15: 156". This quotation and page number are different of those we report herein. The correct citation of the page numbers of the species described in the Histoire naturelle des Poissons, vol. 15 is that of Valenciennes (1840) in the original edition (Paris, Strasbourg), as was pointed out by Hureau and Monod (1973).

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